



US 20190097427A1

(19) **United States**(12) **Patent Application Publication****Rive et al.**(10) **Pub. No.: US 2019/0097427 A1**(43) **Pub. Date: Mar. 28, 2019**(54) **ENERGY GENERATION INTERACTIONS
BYPASSING THE GRID**(71) Applicant: **Tesla, Inc.**, Palo Alto, CA (US)(72) Inventors: **Peter Joshua Rive**, San Francisco, CA
(US); **Eric Daniel Carlson**, San Mateo,
CA (US)(21) Appl. No.: **16/186,390**(22) Filed: **Nov. 9, 2018**(52) **U.S. Cl.**CPC **H02J 3/382** (2013.01); **H02J 3/381**
(2013.01); **H05K 999/99** (2013.01); **Y04S**
10/12 (2013.01); **Y02E 40/72** (2013.01); **H02J**
13/0006 (2013.01); **Y02B 10/30** (2013.01);
H02J 3/32 (2013.01); **Y02B 10/14** (2013.01);
Y04S 10/123 (2013.01)

(57)

ABSTRACT**Related U.S. Application Data**(63) Continuation of application No. 15/153,037, filed on
May 12, 2016, now Pat. No. 10,128,659.**Publication Classification**(51) **Int. Cl.****H02J 3/38** (2006.01)
H02J 13/00 (2006.01)
H02J 3/32 (2006.01)

Methods, devices, and systems for controlling energy generation interactions that bypass the grid may be provided. Flow control devices may be directly connected with one another independent of electrical connections to the utility grid. In some examples, the direct connections between the devices may enable sharing of power, controlling power flow over the direct connections, and/or recording relative power flows between the devices.

